DEPARTMENT OF HEALTH AND HUMAN SERVICES
HEALTH CARE FINANCING ADMINISTRATION

FORM APPROVED
OMB NO. 0938-0193

TRANSMITTAL AND NOTICE OF APPROVAL OF STATE PLAN MATERIAL

FOR: HEALTH CARE FINANCING ADMINISTRATION

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Medicaid

TO: REGIONAL ADMINISTRATOR
HEALTH CARE FINANCING ADMINISTRATION
DEPARTMENT OF HEALTH AND HUMAN SERVICES

4. PROPOSED EFFECTIVE DATE
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5. TYPE OF PLAN MATERIAL *(Check One)*:

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COMPLETE BLOCKS 6 THRU 10 IF THIS IS AN AMENDMENT *(Separate Transmittal for each amendment)*

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Page i-iii Outline
Page 1-36

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Attachment 4.19-A
Page 1-111 Outline
Page 1-32

10. SUBJECT OF AMENDMENT:
Methods & Standards for Establishing Payment Rates - Inpatient Hospital Care

11. GOVERNOR'S REVIEW *(Check One)*:

☐ GOVERNOR'S OFFICE REPORTED NO COMMENT
☐ COMMENTS OF GOVERNOR'S OFFICE ENCLOSED
☐ NO REPLY RECEIVED WITHIN 45 DAYS OF SUBMITTAL
☒ OTHER, AS SPECIFIED:
Janet Schalansky is the Governor's designee.

12. SIGNATURE OF STATE AGENCY OFFICIAL:
Janet Schalansky

13. TYPED NAME:
Janet Schalansky

14. TITLE:
Deputy Secretary

15. DATE SUBMITTED:
06/30/98

16. RETURN TO:
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FOR REGIONAL OFFICE USE ONLY

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19. EFFECTIVE DATE OF APPROVED MATERIAL:
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20. SIGNATURE OF REGIONAL OFFICIAL:
Thomas W. Lenz

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23. REMARKS:
SPA CONTROL
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FORM HCFA-179 (07-92)

Instructions on Back

Methods and Standards for Establishing Payment Rates - Inpatient Hospital Care

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Methods and Standards for Establishing Payment Rates - Inpatient Hospital Care

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Methods and Standards for Establishing Payment Rates - Inpatient Hospital Care

Methods and Standards for Establishing Payment Rates - Inpatient Hospital Care

1.0000 Definitions

The following terms and definitions shall apply to reimbursement for inpatient hospital services.

a. "Admission" means the condition of entry into a hospital for the purpose of receiving inpatient medical treatment.

b. "Allowable cost" means the Medicare definition of allowable cost in effect for a hospital's fiscal year end.

c. "Border cities" mean those communities outside of the state of Kansas but within a 50 mile range of the state border.

d. "Cost outlier" means a general hospital inpatient stay with an estimated cost which exceeds the cost outlier limit established for the respective diagnosis related group.

e. "Cost outlier limit" means the maximum cost of a general hospital inpatient stay established according to a methodology specified by the Department for each diagnosis related group.

f. "Day outlier" means a general hospital inpatient stay which exceeds the day outlier limit established for the respective diagnosis related group.

g. "Day outlier limit" means the maximum general hospital inpatient length of stay established according to a methodology specified by the Department for each diagnosis related group.

h. "Diagnosis related groups (DRG)" means the classification system which arranges medical diagnoses into mutually exclusive groups.

i. "Diagnosis related groups (DRG) adjustment percent" means a percentage assigned by the Department to a diagnosis related group for purposes of computing reimbursement.

j. "Diagnosis related groups (DRG) daily rate" means the dollar amount assigned by the Department to a diagnosis related group for purposes of computing reimbursement when a rate per day is required.

k. "Diagnosis related groups (DRG) reimbursement system" means a reimbursement system in the Kansas Medicaid/MediKan Program for general hospital inpatient services which uses diagnosis related groups for determining reimbursement on a prospective basis.

l. "Diagnosis related groups (DRG) weight" means the numeric value assigned by the Department to a diagnosis related group for purposes of computing reimbursement.

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1.0000 continued

m. "Discharge" means the condition of release from a hospital. A discharge occurs when the recipient leaves the hospital or dies. A transfer to another unit within a hospital (except to a swing bed), or a transfer to another general or state operated hospital is not a discharge.

n. "Discharging hospital" means (in instances of the transfer of a recipient) the hospital which discharges the recipient admitted from the last transferring hospital.

o. "Disproportionate share hospital" means a hospital which has a Medicaid inpatient utilization rate of at least one standard deviation above the mean Medicaid inpatient utilization rate for hospitals receiving Medicaid payments in Kansas, or a hospital whose low income utilization rate exceeds 25 percent. A disproportionate share hospital must have at least two obstetricians who have staff privileges at the hospital and who have agreed to provide obstetric services to Medicaid eligible individuals. This does not apply to a hospital whose inpatients are predominantly under 18 years of age or which does not offer nonemergency obstetric services to the general population as of December 21, 1987. In the case of a hospital located in a rural area as defined by the Health Care Financing Administration, Executive Office of Management and Budget, the term "obstetrician" may include any physician with staff privileges at the hospital to perform nonemergency obstetric procedures.

p. "Estimated cost" means the cost of general hospital inpatient services provided to a recipient which is computed using a methodology specified by the Department.

q. "General hospital" means an establishment with an organized medical staff of physicians, with permanent facilities that include inpatient beds, with medical services, including physician services and continuous registered professional nursing services for not less than 24 hours of every day, and which provides diagnosis and treatment for patients.

r. "General hospital group" means the category to which a general hospital is assigned by the Department for purposes of computing reimbursement.

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1.0000 continued

s. "General hospital inpatient beds" means the number of beds as reported by the general hospital on the hospital and hospital health care complex cost report form excluding those beds designated as skilled nursing facility or intermediate care facility beds. For hospitals not filing the hospital and hospital health care complex cost report form the number of beds shall be obtained from the provider application for participation in the Kansas Medicaid/Medikan Program form.

t. "Group reimbursement rate" means the dollar value assigned by the Department to each general hospital group for a diagnosis related group weight of one.

u. "Length of stay as an inpatient in a general hospital" means the number of days an individual remains for treatment as an inpatient in a general hospital from and including the day of admission, to and excluding the day of discharge.

v. "Low income utilization rate" means the sum of (1) the fraction expressed as a percentage, the numerator of which is the sum for a period of the total revenues paid by Medicaid to the hospital for patient services and the amount of the cash subsidies for patient services received directly from state and local governments, and the denominator of which is the total amount of revenues of the hospital for patient services (including the amount of such cash subsidies) in the period; and (2) a fraction expressed as a percentage, the numerator of which is the total amount of the hospital's charges for inpatient hospital services which are attributable to charity care in a period, less the portion of any cash subsidies (as referred to above in [1]) in the period reasonably attributable to inpatient hospital services, not including contractual allowances and discounts other than for indigent patients not eligible for Medicaid and the denominator of which is the total amount of the hospital's charges for inpatient hospital services in the hospital in the period.

w. "Medicaid inpatient utilization rate" means a fraction expressed as a percentage, the numerator of which is the hospital's number of inpatient days attributable to patients who for such days were eligible for Medicaid in a period, and the denominator of which is the total number of the hospital's inpatient days in that period.

x. "Metropolitan statistical area (MSA)" means a geographic area designated as such by the United States executive office of management and budget.

1.0000 continued

y. "Readmission" means the subsequent admission of a recipient as an inpatient into a hospital within 30 days of discharge as an inpatient from the same or another hospital participating in the DRG reimbursement system.

z. "Recalibration" means the adjustment of all DRG weights to reflect changes in relative resource use associated with all existing DRG categories and/or the creation or elimination of DRG categories.

aa. "Standard diagnosis related group (DRG) amount" means the amount computed by multiplying the group reimbursement rate for the general hospital by the diagnosis related group weight.

bb. "State-operated hospitaL' means an establishment operated by the State of Kansas with an organized medical staff of physicians, with permanent facilities that include inpatient beds, with medical services, including physician services and continuous registered professional nursing services for not less than 24 hours of every day, and which provides diagnosis and treatment for nonrelated patients.

cc. "Stay as an inpatient in a general hospital" means the period of time spent in a general hospital from admission to discharge.

dd. "Transfer" means the movement of an individual receiving hospital inpatient services from one hospital to another hospital for additional related inpatient care after admission to the previous hospital or hospitals.

ee. "Transferring hospital" means the hospital which transfers a recipient to another hospital. There may be more than one transferring hospital for the same recipient until discharge.

2.0000 Reimbursement for Inpatient General Hospital Services According to Diagnosis Related Groups (DRGs)

2.1000 Hospital Participation Effective Date

Effective with services provided on or after ~~October 1, 1996~~ April 1, 1998, general hospitals will be paid in accordance with the Kansas Medicaid/MediKan Diagnosis Related Groups (DRG) Reimbursement System described in 2.0000 and 3.0000. This does not include state-operated hospitals. State-operated hospitals are discussed in 4.000

2.2200 ~~General Billing~~ 2.2000 Billing Requirements

2.2100 General Billing

Under the DRG Reimbursement System a hospital may bill only upon discharge of the recipient except as noted in subsections 2.2300 and 2.2400.

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~~2.2300~~ 2.2200 Transfer Billing

A transferring hospital participating in the DRG Reimbursement System shall submit a bill at the time of transfer even though a transfer is not defined as a discharge. The method of computing reimbursement for a transferring hospital is different from that for a discharging hospital as discussed in subsections 2.5410 and 2.5440.

~~2.2400~~ 2.2300 Interim Billing

An interim bill is a claim which covers less than an entire inpatient stay. A general hospital may, at its option, submit interim billings for an inpatient stay longer than 180 consecutive days with the same DRG assignment. An inpatient stay qualifies for interim payment under the DRG Reimbursement System on the 180th day and at 180 day intervals thereafter in most cases. The following criteria apply:

a. The first interim bill shall begin with the date of admission, and all subsequent interim billings shall start with the day following the last date of service included on the preceding interim billing. There should be no duplication of days between any two consecutive interim bills.

b. Each interim bill shall include no less than 180 days of continuous inpatient stay with the exception of the following two situations where less than 180 days may have elapsed after the preceding interim bill:

The final interim bill at the time of discharge.

The combination interim/federal fiscal year end cut-off billing, because on Oct. 1 of each year a new 180 day interim billing cycle will begin.

2.3000 Hospital Grouping

The Kansas Department of Social and Rehabilitation Services shall assign each general hospital participating in the Kansas Medicaid/Medikan Program to one of three groups. The Department shall redetermine hospital group assignments annually. The Department shall notify in writing each general hospital of its group assignment. The cost reports with fiscal years ending on and before Decer 31 of the previous year shall be used to establish group placement. Effective December 29, 1995, hospitals shall be assigned to groups according to the following method.

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2.3000 continued

a. A general hospital assigned to group one shall be:

1. Located within a metropolitan statistical area in the state of Kansas and have a minimum of 200 general hospital inpatient beds; or
2. Located within the state of Kansas and within 10 miles of a general hospital meeting the criteria set forth in subsection a (1); or
3. Located outside of the state of Kansas or its border cities with a minimum of 200 general hospital inpatient beds.

b. A general hospital assigned to group two shall be:

1. Located within a metropolitan statistical area in the state of Kansas and have less than 200 general hospital inpatient beds, or be located within a metropolitan statistical area in a border city; or
2. Located outside of a metropolitan statistical area in the state of Kansas or its border cities, and have a minimum of 100 general hospital inpatient beds; or
3. Located within 10 miles of a general hospital meeting the criteria set forth in subsections b (1) or b (2); or
4. Located outside of the state of Kansas or its border cities with at least 100 but less than 200 general hospital inpatient beds.

c. A general hospital shall be assigned to group three if it does not meet the criteria pursuant to subsections a or b above.

d. A general hospital shall be assigned to group one if it meets the criteria for assignment to both group one and group two.

2.4000 The DRG Reimbursement System Components

The Kansas Department of Social and Rehabilitation Services has used the DRG classification published by Health Care Financing Administration (HCFA) for developing the necessary components of the DRG Reimbursement System. In addition, effective Oct. 1, 1992, the Department has established new DRG classifications for neonatal services as indicated below.

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385 Short stay neonates died or transferred (2 day maximum)
386 through 388 No longer used
389 Birth weight > 2000 grams, full term with major problems
390 Birth weight > 2000 grams, full term with other problems
391 Birth weight > 2000 grams, premature or full term, without complicating diagnoses
801 Birth weight < 1000 grams
802 Birth weight 1000 - 1499 grams
803 Birth weight 1500 - 2000 grams
804 Birth weight > 2000 grams, w/ respiratory distress syndrome
805 Birth weight > 2000 grams, premature w/ major problem

After the DRG number reassignments, all these claims became part of the total data base used for the DRG Reimbursement System.

Subsections 2.4100 through 2.4700 provide a discussion of the development of all the system components for use effective ~~October 1, 1996~~ April 1, 1998. The discussion flows in the order of the steps performed for the computations involved. For example, the establishment of the data base (Subsection 2.4100) was necessary before cost determination (Subsection 2.4200), outlier claims had to be identified (Subsection 2.4300) prior to separating them out from the data base (Subsection 2.4410).

2.4100 Data Base

For developing the DRG relative weights, group payment rates, and other system components for use effective ~~October 1, 1996~~ April 1, 1998, the Department used as data base the Medicaid/MediKan paid claims for services, ~~the two year period ending May 26, 1996~~ the eighteen month period ending in June, 1997. Certain claims were excluded from the data base while some others were modified before including in the data base as listed below.

2.4110 Claims Excluded from the Data Base

- crossover claims (Medicare paid by Medicaid).
- swing bed claims.
- claims paid from out-of-state hospitals.
- claims from transferring hospitals (in case of transfers, only the claims from the final discharging hospitals were included in the data base), except for DRG's 385 and 456.
- adjusted claims (in cases where a hospital resubmitted a claim with corrections, the original claim was excluded from the data base. Only the final paid claim was included).
- interim claims which could not be matched together.

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- claims with unusually low cost data for the given DRG, or other abnormal data.

2.4120 Claims Modified Before Including in the Data Base

Interim claims were identified and matched together to result in either a complete stay or a lengthy stay where no discharge had occurred.

2.4200 Determination of the Costs of Claims

The cost of each claim in the data base was determined using the cost data from the respective hospital's cost report, as discussed below.

2.4210 Cost Reports

The Department used the most recently available unaudited hospital cost reports to obtain the cost data for determining costs of claims.

2.4220 Cost Data

The cost data considered for computing costs of claims included education and capital costs. Indirect and direct medical education costs were later removed, however, as specified in Section 2.4240.

2.4230 Cost Determination

The reimbursable Medicaid/MediKan cost of each claim was computed by applying the per day rates (Worksheet D-1) and cost-to-charge ratios (Worksheet C) obtained from the corresponding hospital's cost report, to the covered Medicaid/MediKan days and ancillary charges on the claim.

2.4240 Hospital Specific Adjustments

Medical Education: Indirect and direct medical education costs identified in the cost reports were removed. These were added back as hospital specific medical education rates as explained in section 2.4530.

2.4250 Example to Illustrate Cost Determination

Data

- Medicaid days and charges from a claim (the first and third columns in the routine service table and the second column in the ancillary service table).

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2.4250 continued

- Rates and cost-to-charge ratios from the hospital cost report (the second column in the routine service table and the first column in the ancillary service table).

Computations

Routine Cost = No. of Days x Rate
Ancillary Cost = Charges x Ratio

Routine Services	Medicaid/Medikan Days	Rate	Charges	Cost
Routine	6	$247.70	$1,500	$1,486.20
Nursery	0	300.42	0	.00
ICU	1	399.36	400	399.36
CCU	0	399.36	0	.00
Sub 1	0	247.70	0	.00
Sub 2	0	247.70	0	.00
Subtotal - Routine	7		$1,900	$1,885.56

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2.4250 continued

Ancillary Services	Ratio	Charges	Cost
Operating Room	0.673302	$ 150.00	$ 101.00
Recovery Room	0.673302	30.00	20.20
Delivery Room	1.167897	.00	.00
Anesthesia	0.768581	75.00	57.64
Radiology - Diagnostic	0.725719	225.00	163.29
Radiology - Therapeutic	0.725719	.00	.00
Nuclear Medicine	0.587560	.00	.00
Laboratory	0.709475	175.00	124.16
Blood	0.709475	25.00	17.74
Respiratory Therapy	0.338426	.00	.00
Physical Therapy	0.689033	.00	.00
Occupational Therapy	2.700472	.00	.00
Speech Therapy	0.912793	.00	.00
EKG	0.206447	50.00	10.32
EEG	0.206447	.00	.00
Medical Supplies	0.473224	325.00	153.80
Pharmacy	0.437813	400.00	175.13
Renal Dialysis	0.000000	.00	.00
Ultrasound	0.477787	.00	.00
Emergency	1.508338	.00	.00
Subtotal (Used for Other Charges Ratio)		$1,455.00	$ 823.28
Other Charges	0.56650	.00	.00
Subtotal - Ancillary		$1,455.00	$ 823.28
Total Medicaid Charges and Cost		$3,355.00	2,708.84

Analysis

In this example, the final cost of the claim is $2,708.84.

2.4260 Inflation of the Cost and Charge Data

Due to the variety of cost report time periods and discharge dates, the schedule below was used to inflate routine and ancillary data. These were applied to the final costs as determined in Subsection 2.4240 above.

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Section 2.4260 continued

Routine Inflation

Hospital FYE	Inflation
12/31/95	4.23%
1/31/96	4.00%
2/28/96	3.78%
3/31/96	3.55%
4/30/96	3.33%
5/31/96	3.10%
6/30/96	2.88%
7/31/96	2.65%
8/31/96	2.43%
9/30/96	2.20%
10/30/96	2.02%
12/31/96	1.65%

Ancillary Inflation

Discharge Date	Inflation
7/31/95	4.25%
8/31/95	4.03%
9/30/95	3.80%
10/31/95	3.58%
11/30/95	3.35%
12/31/95	3.13%
1/31/96	2.90%
2/29/96	2.68%
3/31/96	2.45%
4/30/96	2.23%
5/31/96	2.00%
6/30/96	1.78%
7/31/96	1.55%
8/31/96	1.33%
9/30/96	1.10%
10/30/96	0.92%
12/31/96	0.00%

These amounts are applied to routine data, ancillary charges had already been increased by hospitals at their discretion as newer claims data was submitted. Based upon a comparison of the cost to charge ratios used for ancillaries, ancillary cost to charge ratios have generally declined or held steady. Therefore, the adjustment for ancillary charges should only be from the date of the service rather than from the cost report.

The inflation used was based upon a review of various price indices, changes in utilization, changes in case mix, and other relevant information. The inflation rate specifically considers the use of newer cost reports and the continued anticipated decline in average lengths of stay which reduce the cost of the average Medicaid stay.

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2.4300 Identification of Outlier Claims in the Data Base

2.4310 Mean Costs and Mean Lengths of Stay

After determining costs of all claims in the data base (as discussed in subsection 2.4200), the claims were accumulated by DRG number. The next step was to compute the following for each DRG:

- Mean cost per stay
- Standard deviation of the cost per stay
- Mean length of stay (LOS)
- Standard deviation of the length of stay
- Geometric mean length of stay

2.4320 Establishment of Outlier Limits

Cost and day outlier limits were then computed for each DRG by adding 1.94 standard deviations to the mean as shown in the following formulae:

Cost Outlier Limit =	Mean Cost Per Stay	+ 1.94 x	Standard Deviation of Cost
Day Outlier Limit =	Geometric Mean Length of Stay	+ 1.94 x	Standard Deviation of LOS

Note: The day outlier limits were rounded down to the nearest whole number because portions of a day were not considered as a full inpatient day.

A claim is an outlier if its cost or length of stay exceeds the cost or day outlier limit respectively. Therefore, the costs and lengths of stay of all claims in each DRG were compared with the cost and day outlier limits established as discussed above for the corresponding DRG, to determine which claims were cost or day outliers.

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2.4330 Example of Identifying Outliers

	Days	Cost
Claim # 1 -	1	$1,039
Claim # 2 -	1	972
Claim # 3 -	1	916
Claim # 4 -	1	446
Claim # 5 -	2	1,054
Claim # 6 -	2	495
Claim # 7 -	2	1,976
Claim # 8 -	2	743
Claim # 9 -	3	1,131
Claim #10 -	3	923
Claim #11 -	3	2,479
Claim #12 -	3	1,573
Claim #13 -	4	1,234
Claim #14 -	4	1,196
Claim #15 -	4	1,641
Claim #16 -	4	2,749
Claim #17 -	5	1,586
Claim #18 -	5	1,583
Claim #19 -	5	2,341
Claim #20 -	10	3,314

Computations

Total Cost..... $29,391
Mean Cost Per Stay (Total Cost/Total Claims)..... 1,470
Standard Deviation of the Cost Per Day..... 746

Total Number of Days..... 65 days
Mean Length of Stay (Total Days/Total Claims)..... 3.25
Standard Deviation of the LOS..... 2.05
Geometric Mean Length of Stay. 2.70

Cost Outlier Limit = Mean Cost Per Stay + 1.94 x Std. Dev.
= $1,470 + (1.94 x $746)
= $2,917

Day Outlier Limit = Geometric Mean LOS + 1.94 x Std. Dev.
= 2.70 + (1.94 x 2.05)
= 6.68 days
or 6 days

Analysis

Cost Outliers: All claims with costs up to and including $2,917 (the cost outlier limit) are non-cost outlier claims. Claims with costs over $2,917 are outlier claims. Among the above listed claims, only claim #20 is a cost outlier with a cost of $3,314.

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2.4330 continued

Day Outliers: Claims with lengths of stay of 6 days or less are non-day outlier claims, whereas claims with lengths of stay 8 days and higher are day outliers. Out of the claims listed in this example, only claim #20 with a LOS of 10 days is a day outlier.

2.4400 DRG Relative Weights

The Kansas Department of Social and Rehabilitation Services developed DRG relative weights specific to the Kansas Medicaid/MediKan utilization of general hospital inpatient services. The weights for low-volume DRGs were determined using DRG weights from external data, with preference given to DRG weights derived from populations expected to be similar to the Kansas Medicaid population.

DRG relative weights are used in conjunction with other components of the DRG reimbursement system for computing payment. Determination of payment is discussed in section 2.5000.

2.4410 Data Base Adjustments for DRG Weight Computations

In computing DRG relative weights the cost of each outlier claim (identified in subsection 2.4300) was capped at the outlier threshold for the DRG.

2.4420 Determination of Kansas Medicaid-Specific DRG Relative Weights

For each DRG the following averages were computed from the adjusted data base:

- average cost per stay;
- average length of stay; and
- average cost per day.

The above "average" costs and LOS differ from the "mean" costs and LOS determined earlier in subsection 2.4300. The data base used for the mean costs and mean lengths of stay in subsection 2.4300 included outlier claims, whereas, the above average costs and LOS were computed from the adjusted data base consisting of non-outlier claims and outlier claims capped at the outlier threshold of that DRG (subsection 2.4410).

An "overall average cost" for each DRG was determined from the adjusted data base. Assigning this overall average cost a weight of 1.00, a relative weight was computed for each DRG based on its average cost per stay determined above, as compared to the overall average cost:

$$\text{DRG Relative Weight} = \frac{\text{Average Cost of the DRG}}{\text{Overall Average Cost}}$$

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2.4430 Example to Illustrate the Computation of Kansas Medicaid-Specific DRG Weights

Data

This example uses the same data as in subsection 2.4330, "Example of Identifying Outliers". Since claim #20 was determined to be both a cost and a day outlier, listed below are the claims, including the capped outlier claims used in computing the relative weight of this DRG:

	Days	Cost
Claim # 1 -	1	$1,039
Claim # 2 -	1	972
Claim # 3 -	1	916
Claim # 4 -	1	446
Claim # 5 -	2	1,054
Claim # 6 -	2	495
Claim # 7 -	2	1,976
Claim # 8 -	2	743
Claim # 9 -	3	1,131
Claim #10 -	3	923
Claim #11 -	3	2,479
Claim #12 -	3	1,573
Claim #13 -	4	1,234
Claim #14 -	4	1,196
Claim #15 -	4	1,641
Claim #16 -	4	2,749
Claim #17 -	5	1,586
Claim #18 -	5	1,583
Claim #19 -	5	2,341
Claim #20 -	6	2,917

Overall Average Cost: $2,106.68
(All claims in data base)

Computations

Total Cost.....$28,994.00
Average Cost Per Stay (Total Cost/Total Claims).. 1,449.70

$$\text{Relative Weight of the DRG} = \frac{\text{Average Cost of the DRG}}{\text{Overall Average Cost of all DRGs}}$$

$$= \frac{1,449.70}{2,106.68}$$

$$= .6881$$